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Montana State University awarded National Science Foundation grant to continue physics research

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Montana State University has been awarded a $27,500 National Science Foundation grant to continue research in physics directed by Dr. Mark J. Jakobson, MSU officials announced. The grant, to support the project for another two years, brings the total NSF awards for the purpose in the past seven years to $80,900.

Dr. Jakobson's research on photo-neutron cross sections is conducted with the aid of the University's 7 million electron-volt linear accelerator. The MSU physicist uses the "atom smasher" to study the range of electrons in materials and the disintegration of beryllium atoms under bombardment by high-energy x-rays and electrons.

The accelerator uses the traveling-wave principle to accelerate electrons to a maximum energy of 7 million electron-volts. Electrons from a 250,000-volt electron gun are injected into one end of the accelerator cavity along with a pulse of high-frequency power. The electrons are accelerated as they ride along the crest of this high-frequency signal to the end of the cavity, reaching an energy of 7 million electron-volts as they shoot out of the accelerator tube in a beam ready for use.

Dr. Jakobson's findings will add to basic knowledge of man's physical environment and will probably contribute to technological advances that will give man greater control over his environment, MSU officials commented.

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